

What Is Claimed Is:

1. An imaging material comprising a support having disposed thereon:

- a) at least one image-forming layer, and
- b) at least one transparent electrically conductive antistatic layer that comprises electronically conductive polymer particles, a neutral-charge conductivity enhancer, and a hydrophilic polymeric binder.

2. The imaging material of claim 1 wherein said electronically conductive polymer particles comprise from 5 to 95 weight % of the total weight of said at least one antistatic layer.

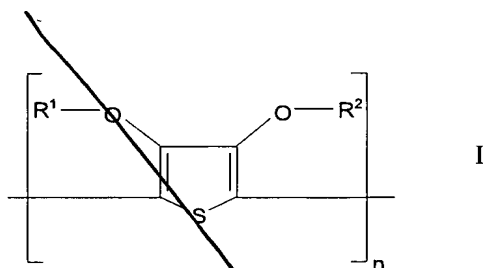
3. The imaging material of claim 1 wherein said support is an unsubbed support.

4. The imaging material of claim 1 wherein said neutral-charge conductivity enhancer is present in an amount from 0.02 to 90 weight % based on the total weight of said antistatic layer.

5. The imaging material of claim 1 wherein said electronically conductive polymer particles comprise a pyrrole-, thiophene-, or aniline-containing polymer.

6. The imaging material of claim 1 wherein said antistatic layer comprises electronically conductive polymer particles of a polythiophene present in a cationic form with a polyanion, said polythiophene comprising recurring units defined by the following Formula I wherein R_1 and R_2 are independently hydrogen or a substituted or unsubstituted alkyl group having 1 to 4 carbon atoms, or together form a substituted or unsubstituted group or a substituted or unsubstituted 1,2-cyclohexylene group:

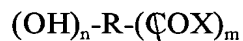
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A2,
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7. The imaging material of claim 1 wherein said antistatic layer is a subbing layer on said support and has at least one additional layer disposed thereon.

8. The imaging material of claim 1 wherein said neutral-charge conductivity enhancer is:

(A) represented by the following Structure II:



II

wherein m and n are independently an integer of from 1 to 20, R is an alkylene group having 2 to 20 carbon atoms, an arylene group having 6 to 14 carbon atoms in the arylene chain, a pyran group, or a furan group, and X is -OH or -NYZ, wherein Y and Z are independently hydrogen or an alkyl group, or

(B) a sugar, sugar derivative, polyalkylene glycol, or glycerol compound.

9. The imaging material of claim 8 wherein said neutral-charge conductivity enhancer is a N-methylpyrrolidone, pyrrolidone, caprolactam, N-methylcaprolactam, N-octylpyrrolidone, sucrose, glucose, fructose, lactose, sugar alcohol, 2-furan carboxylic acid, 3-furan carboxylic acid, sorbitol, glycol,

ethylene glycol, glycerol, diethylene glycol, or triethylene glycol, or a mixture of any two or more of these compounds.

10. The imaging material of claim 9 wherein said neutral-charge conductivity enhancer is N-methylpyrrolidone, pyrrolidone, caprolactam, N-methyl caprolactam, or N-octylpyrrolidone.

11. The imaging material of claim 9 wherein said neutral-charge conductivity enhancer is ethylene glycol, diethylene glycol or glycerol.

12. The imaging material of claim 6 wherein said polyanion is polystyrene sulfonic acid.

13. The imaging material of claim 9 wherein said neutral-charge conductivity enhancer is one or more than one compound selected from the group consisting of N-methylpyrrolidone, sorbitol, ethylene glycol, glycerol, and diethylene glycol.

14. The imaging material of claim 9 wherein said neutral-charge conductivity enhancer is ethylene glycol, glycol or glycerol.

15. The imaging material of claim 1 wherein said hydrophilic binder comprises a water-dispersible or water-soluble polymer.

16. The imaging material of claim 1 wherein said hydrophilic binder comprises carboxymethyl cellulose, hydroxyethyl cellulose, cellulose acetate butyrate, diacetyl cellulose, or triacetyl cellulose or other hydrophilic cellulose derivatives.

17. The imaging material of claim 1 wherein said hydrophilic binder comprises polyvinyl alcohol, poly-N-vinylpyrrolidone, acrylic acid copolymers, polyacrylamide or their derivatives or partially hydrolyzed products, or other hydrophilic synthetic resins.

18. The imaging material of claim 1 wherein said hydrophilic polymeric binder is gelatin or a derivative thereof.

19. The imaging material of claim 1 wherein said electronically conductive polymer particles exhibit a packed powder specific resistivity of 10^5 ohm-cm or less.

20. The imaging material of claim 1 wherein said electronically conductive polymer particles have a mean diameter of 0.5 μm or less.

21. The imaging material of claim 1 wherein said electronically conductive polymer particles have a mean diameter of 0.1 μm or less.

22. The imaging material of claim 1 wherein said electronically conductive polymer particles are present in said antistatic layer at a dry coverage of from 0.002 to 0.5 g/m^2 .

23. The imaging material of claim 22 wherein said electronically conductive polymer particles are present in said antistatic layer at a dry coverage of from 0.003 to 0.1 g/m^2 .

24. The imaging material of claim 1 wherein said at least one antistatic layer has a surface electrical resistivity of less than 1×10^{12} ohm per square.

25. The imaging material of claim 24 wherein said at least one antistatic layer has a surface electrical resistivity of less than 1×10^{10} ohm per square.

26. The imaging material of claim 24 wherein said at least one antistatic layer has a surface electrical resistivity of less than 1×10^8 ohm per square.

27. The imaging material of claim 1 wherein said support comprises a poly(ethylene terephthalate), poly(ethylene naphthalate), or cellulose acetate film, or an uncoated, resin coated, laminated, or synthetic paper.

28. The imaging material of claim 1 wherein said antistatic layer further comprises an antihalation composition.

29. The imaging material of claim 1 comprising at least one of said antistatic layers on each side of said support.

30. The imaging material of claim 1 wherein said at least one image-forming layer comprises a photosensitive silver halide.

31. The imaging material of claim 30 wherein said at least one photosensitive silver halide-containing layer is on the same side of the support as said antistatic layer.

32. The imaging material of claim 30 wherein said at least one photosensitive silver halide-containing layer is on the opposite side of the support as said antistatic layer.

33. The imaging material of claim 31 wherein said photosensitive silver halide-containing layer is underneath said antistatic layer.

34. The imaging material of claim 31 wherein said photosensitive silver halide-containing layer is disposed over said antistatic layer

35. The imaging material of claim 1 comprising at least one image-forming layer on each side of said support.

36. The imaging material of claim 31 comprising at least one photosensitive silver halide-containing layer on each side of said support.

37. The imaging material of claim 36 comprising at least one of said antistatic layers on each side of said support.

38. The imaging material of claim 1 wherein said image-forming layer is a non-silver halide imaging layer.

39. The imaging material of claim 1 wherein said image-forming layer is a thermally imageable layer.

40. The imaging material of claim 1 wherein said image-forming layer is a photosensitive, thermally developable layer.

41. The imaging material of claim 1 wherein said image-forming layer is a electrophotographic imaging layer.

42. The imaging material of claim 1 wherein said image-forming layer is a black-and-white photographic silver halide emulsion layer.

43. The imaging material of claim 1 wherein said at least one image-forming layer is a color photographic silver halide emulsion layer.

44. The imaging material of claim 1 wherein said image-forming layer is a thermal head or laser transfer donor or receiving layer.

45. The imaging material of claim 1 that is a black-and-white photographic film or paper.

46. The imaging material of claim 43 that is a black-and-white radiographic film.

47. The imaging material of claim 1 that is an infrared radiation sensitive imaging or scannable material.

48. The imaging material of claim 1 that is a color photographic color negative or reversal film, color motion picture film or print, or a photographic color paper.

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